

AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT			1. CONTRACT ID CODE	PAGE OF PAGES 1   2
2. AMENDMENT/MODIFICATION NO. 0002	3. EFFECTIVE DATE 03/05/2004	4. REQUISITION/PURCHASE REQ. NO. RFQ-RT-04-00169		5. PROJECT NO. (If applicable)
6. ISSUED BY Environmental Protection Agency Attn: Joel P. Smith RTP-POD, ORDSC, E105-02 Research Triangle Park, NC 27711		7. ADMINISTERED BY (If other than Item 6) U.S. EPA Attn: Joel P. Smith, Contract Specialist RTP-POD, ORDSC, E105-02 Research Triangle Park, NC 27711  (919) 541-0184		

8. NAME AND ADDRESS OF CONTRACTOR (No., street, county, State and ZIP Code)	(✓)	9A. AMENDMENT OF SOLICITATION NO. Solicitation: RFQ-RT-04-00169, Amendment: 0002
	✓	9B. DATED (SEE ITEM 11)
		10A. MODIFICATION OF CONTRACT/ORDER NO.
		10B. DATED (SEE ITEM 13)
CODE FACILITY CODE		

#### 11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS

[X] The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offers [X] is extended, [ ] is not extended.

Offers must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended, by one of the following methods:  
(a) By completing Items 8 and 15, and returning 1 copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.

#### 12. ACCOUNTING AND APPROPRIATION DATA (If required)

See the section, Accounting/Appropriation Data, in the attachment on Page 2.

#### 13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACTS/ORDERS, IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.

(✓)	A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A
	B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(b).
	C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:
	D. OTHER (Specify type of modification and authority)

E. IMPORTANT: Contractor [ ] is not, [ ] is required to sign this document and return \_\_\_\_\_ copies to the issuing office.

#### 14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)

- The purpose of Amendment #2 to Request for Quote RFQ-RT-04-00169 is to attach a question received pertaining to this solicitation, and the Government's response. See Questions Pertaining to RFQ-RT-04-00169, attached.
- Additionally, Amendment #2 extends the due date for all proposals from 3:30 PM local time, March 12, 2004 to 3:30 PM local time, March 15, 2004.
- There are no further changes to this solicitation.

Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.

15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) JOEL P. SMITH	
15B. CONTRACTOR/OFFEROR  (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  (Signature of Contracting Officer)	16C. DATE SIGNED

NSN 7540-01-152-8070  
PREVIOUS EDITION UNUSABLE

30-105

STANDARD FORM 30 (REV 10-83)  
Prescribed by GSA  
FAR (48 CFR) 52.

## **Questions pertaining to RFQ-RT-04-00169, Amendment #2**

**1. QUESTION:** Please describe the the file formats that EPA stores the data in for the following Brewer files:

1) the DUV files, 2) the Y files, 3) the D files, 4) the PUX files, 5) the Avg files, 6) the UX files, and 7) the files which contain the mercury lamp scans and the standard lamp scans. All these files are necessary to determine overall accuracy and/or continuity of the data. Will there be access to the data files on the EPA computers, or would you please provide me with examples of each?

**1. ANSWER:** You can obtain the data collected by the EPA UV network from EPA's publically-available website: <http://www.epa.gov/uvnet/>

On the left side of that webpage if you select **Access Data** (<http://www.epa.gov/uvnet/access.html>) you will get access to the data for all 21 sites. All but two sites were updated with additional data in December 2003.

When you look at the data for each site, you will find **two folders (Input and Output)**. The folder containing some of the data that you want is labeled **Output**. In the Output folder, you will find **two files (RV and SV)**. The basic difference between the data in these two files:

**RV file - contains RW data** with the following file naming format: RWJJJYY.087 (RTP) - **See #1 below**

**SV file - contains SW data** with the following file naming format: SWJJJYY.087 (RTP) - **See #2 below**

The data in these files (space-delimited ASCII files) contain [corrected] UV-B data:

The information for each Brewer Spectrophotometer in the network is given as follows (**using RTP as the example**)

### **Site Information**

Brewer #087

Research Triangle Park (RTP)

Latitude = 35.888

Longitude = 78.875

Altitude = 134m

Time Difference to UTC = 5hrs

Average Ozone = 284DU

[DU = Dobson Unit -> the height in millicentimeters that pure gaseous ozone (O3) would occupy if compressed by 1013hPa (pressure) at 0 degrees Celsius (temperature) -> 2.69 X 10<sup>16</sup> molecules/m<sup>2</sup> (molecules per square meter)]

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1. The files marked **RW**: (for the RTP Brewer spectrophotometer, this file would be marked as RWJJJYY.087), consist of **spectral data** in the range of 286.5 nm to 363 nm (in steps of 0.5 nm) and have a variable file length, based on the number of UV scans corresponding to a particular day (nm = nanometers -> measurement of UV wavelength):

**Data included in file:** YYYY (year), JJJ (Julian Day), DD/MM/YY (date), RESPONSE1/RESPONSE2, Latitude, Longitude, Site name, Brewer No., Scan No., UTC hrs, SZA (Solar Zenith Angle - degrees), Local Standard Time of the mid UV scan, Brewer temperature (deg Celsius), time flag, number of (data) outliers, number of corrected (data) outliers, version number of the UV/QA correction program, and the sequence of letters defining the irradiance corrections: TO - temporal; TE - temperature and CO - cosine.

**Data unique to RW file:** UTC (minutes), Wavelength (angstroms), Irradiance ( $\text{W/m}^2/\text{nm}$  - Watts per square meter per nanometer)

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2. The files marked **SW**: (for the RTP Brewer spectrophotometer, this file would be marked as SWJJYY.087), consist of **unweighted and weighted** (erythral action **spectra**/Spectral Response Function [SRF]) data corresponding to the number of UV scans: consist of **unweighted and weighted** (erythral action **spectra**/Spectral Response Function [SRF]) data corresponding to the number of UV scans: consist of **unweighted and weighted** (erythral action **spectra**/Spectral Response Function [SRF]) data corresponding to the number of UV scans:

**Data included in file:** YYYY (year), JJJ (Julian Day), DD/MM/YY (date), RESPONSE1/RESPONSE2, Latitude, Longitude, Site name, Brewer No., Scan No., UTC hrs, SZA (Solar Zenith Angle - degrees), Local Standard Time of the mid UV scan, Brewer temperature (deg C), time flag, number of (data) outliers, number of corrected (data) outliers, version number of the UV/QA correction program, and the sequence of letters defining the irradiance corrections: TO - temporal; TE - temperature and CO - cosine.

**Data unique to SW file:** Tropospheric UV (model) - TUV % irradiance (330 to 363 nm) ,13 bands of unweighted spectral data Biologically Effective Irradiance, [UVbio ] ( $\text{W/m}^2$ - Watts per square meter), 13 bands of weighted spectral data

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3. The files marked **DW**: (for the RTP Brewer spectrophotometer, this file would be marked as DWYY.087), consist of the **daily integrated erythemally weighted UV data (DUV)**:

**Data included in file:** YYYY (year), JJJ (Julian Day), DD/MM/YY (date), number of UV scans / the 'ideal' number of UV scans, RESPONSE1/RESPONSE2, time flag, number of (data) outliers, number of corrected (data) outliers. daily integrated erythemally weighted UV data {irradiance} - DUV: ( $\text{J/m}^2/\text{day}$  - Joules per square meter per day) - **dose** ; daily integrated UV irradiance ( $\text{W/m}^2/\text{day}$  - Watts per square meter per day) - **dose rate**

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4. The files marked **FLGW**: (for the RTP Brewer spectrophotometer, this file would be marked as FLGWYY.087), contain information corresponding to the **current run of the UV/QA program**. Comma and semi-colon delimiters are also used. This file has a variable length based on the **number of flags detected for the scans** corresponding to the day number range:

Brewer number Day number Missing scans [e.g. MS2 - missing scan on day 2], incorrect time sequence corresponding to scan [e.g. TS4 - timescan number 4], and wavelengths with (data) outliers detected corresponding to the scan [e.g. OD3;3200 - outlying data point number 3, for scan number 3200].

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**2. QUESTION:** In Comparing UGA's DUV data on the Government WEB site to the DUV data produced by the Brewer itself. It looks like the UGA data is produced from the corrected UV scans that they do in producing their final QA/QC 'ed database. My question arises in making a comparison between their data and what the Brewer produces. In the attached graph there is almost a 10 percent difference between the two. Why is there such a large difference? I wouldn't think that the corrections applied to the data would make that big a difference?

**2. ANSWER:** The QA/QC algorithm/program created by UGA to check the raw data for inconsistency uses a series of checks to remove the high, low and 'questionable' data points. The algorithm tends to remove data points that are a certain percentage above and below the average data values and outliers/spikes are removed also. This might explain the 10% difference.